APPENDIX D

Capacity Analysis

URBAN STREET WORKSHEET #1

General Information		Site Information	
Analyst	*PSB*	Urban Street	*SR 9*
Agency/Co.	*P.I. Cripe, Inc.*	Direction of Travel	*North-bound*
Date Performed	*2/18/2005*	Jurisdiction	*Greenfield*
Time Period		Analysis Year	*2022*

Project Description: *SR 9 2022 No Build*

Input Parameters

Analysis Period(h) T = *0.25*	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)	*101.0*	*65.0*	*88.0*	*100.0*				
Eff. green to cycle ratio, g/C	*0.396*	*0.615*	*0.341*	*0.450*				
v/c ratio for lane group, X	*0.677*	*0.557*	*1.279*	*1.285*				
Cap of lane group, c (veh/h)	*1314*	*2042*	*1157*	*625*				
Pct Veh on Grn., PVG								
Arrival type, AT	*4*	*4*	*4*	*4*				
Unit Extension, UE (sec)	*0.0*	*0.0*	*0.0*	*0.0*				
Length of segment, L (mi)	*0.50*	*0.50*	*0.50*	*1.00*				
Initial Queue, Qb (veh)	*0*	*0*	*0*	*0*				
Urban street class, SC	*2*	*2*	*2*	*2*				
Free-flow speed, FSS (mi/h)	*40*	*40*	*40*	*40*				
Running Time, TR (s)	*46.5*	*46.5*	*46.5*	*90.0*				
Other delay, (s)	*0.0*	*0.0*	*0.0*	*0.0*				
Delay Computation								
Uniform delay, d1 (s)	*25.2*	*7.3*	*29.0*	*27.5*				
Incremental delay adj, k	*0.50*	*0.50*	*0.50*	*0.50*				
Upstream filtering adj factor, I	*1.000*	*0.681*	*0.810*	*0.090*				
Incremental delay, d2 (s)	*2.8*	*0.8*	*131.2*	*129.3*				
Initial queue delay, d3 (s)	*0*	*0*	*0*	*0*				
Progression adj factor, PF	*0.899*	*0.537*	*0.952*	*0.837*				
Control delay, d (s)	*25.4*	*4.7*	*158.8*	*152.3*				
Segment LOS Determination								
Travel time, ST (s)	*71.9*	*51.2*	*205.3*	*242.3*				
Travel speed, SA (mi/h)	*25.0*	*35.2*	*8.8*	*14.9*				
Segment LOS	*C*	*A*	*F*	*E*				

Urban Street LOS Determination

Total travel time (s)	*570.7*
Total length (mi)	*2.50*
Total travel speed, SA (mi/h)	*15.8*
Total urban street LOS	*E*

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URBAN STREET WORKSHEET #1

General Information		Site Information	
Analyst	*PSB*	Urban Street	*SR 9*
Agency/Co.	*P.I. Cripe, Inc.*	Direction of Travel	*North-bound*
Date Performed	*2/18/2005*	Jurisdiction	*Greenfield*
Time Period		Analysis Year	*2022*

Project Description: *SR 9 2022 Alt. E1*

Input Parameters

Analysis Period(h) T = *0.25*	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)	*101.0*	*65.0*	*88.0*	*100.0*				
Eff. green to cycle ratio, g/C	*0.396*	*0.615*	*0.341*	*0.450*				
v/c ratio for lane group, X	*0.611*	*0.505*	*1.223*	*1.226*				
Cap of lane group, c (veh/h)	*1314*	*2042*	*1156*	*625*				
Pct Veh on Grn., PVG								
Arrival type, AT	*4*	*4*	*4*	*4*				
Unit Extension, UE (sec)	*0.0*	*0.0*	*0.0*	*0.0*				
Length of segment, L (mi)	*0.50*	*0.50*	*0.50*	*1.00*				
Initial Queue, Qb (veh)	*0*	*0*	*0*	*0*				
Urban street class, SC	*2*	*2*	*2*	*2*				
Free-flow speed, FSS (mi/h)	*40*	*40*	*40*	*40*				
Running Time, TR (s)	*46.5*	*46.5*	*46.5*	*90.0*				
Other delay, (s)	*0.0*	*0.0*	*0.0*	*0.0*				
Delay Computation								
Uniform delay, d1 (s)	*24.3*	*7.0*	*29.0*	*27.5*				
Incremental delay adj, k	*0.50*	*0.50*	*0.50*	*0.50*				
Upstream filtering adj factor, I	*1.000*	*0.757*	*0.854*	*0.090*				
Incremental delay, d2 (s)	*2.1*	*0.7*	*107.3*	*102.9*				
Initial queue delay, d3 (s)	*0*	*0*	*0*	*0*				
Progression adj factor, PF	*0.899*	*0.537*	*0.952*	*0.837*				
Control delay, d (s)	*24.0*	*4.4*	*134.9*	*125.9*				
Segment LOS Determination								
Travel time, ST (s)	*70.5*	*50.9*	*181.4*	*215.9*				
Travel speed, SA (mi/h)	*25.5*	*35.3*	*9.9*	*16.7*				
Segment LOS	*C*	*A*	*F*	*E*				

Urban Street LOS Determination

Total travel time (s)	*518.7*
Total length (mi)	*2.50*
Total travel speed, SA (mi/h)	*17.4*
Total urban street LOS	*D*

Slight improvement over No Build

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URBAN STREET WORKSHEET #1

General Information		Site Information	
Analyst	*PSB*	Urban Street	*SR 9*
Agency/Co.	*P.I. Cripe, Inc.*	Direction of Travel	*North-bound*
Date Performed	*2/18/2005*	Jurisdiction	*Greenfield*
Time Period		Analysis Year	*2022*

Project Description: *SR 9 2022 Alt. L2*

Input Parameters

Analysis Period(h) T = *0.25*	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)	*101.0*	*65.0*	*88.0*	*100.0*				
Eff. green to cycle ratio, g/C	*0.396*	*0.615*	*0.341*	*0.450*				
v/c ratio for lane group, X	*0.662*	*0.530*	*1.250*	*1.275*				
Cap of lane group, c (veh/h)	*1314*	*2042*	*1158*	*625*				
Pct Veh on Grn., PVG								
Arrival type, AT	*4*	*4*	*4*	*4*				
Unit Extension, UE (sec)	*0.0*	*0.0*	*0.0*	*0.0*				
Length of segment, L (mi)	*0.50*	*0.50*	*0.50*	*1.00*				
Initial Queue, Qb (veh)	*0*	*0*	*0*	*0*				
Urban street class, SC	*2*	*2*	*2*	*2*				
Free-flow speed, FSS (mi/h)	*40*	*40*	*40*	*40*				
Running Time, TR (s)	*46.5*	*46.5*	*46.5*	*90.0*				
Other delay, (s)	*0.0*	*0.0*	*0.0*	*0.0*				
Delay Computation								
Uniform delay, d1 (s)	*25.0*	*7.1*	*29.0*	*27.5*				
Incremental delay adj, k	*0.50*	*0.50*	*0.50*	*0.50*				
Upstream filtering adj factor, I	*1.000*	*0.699*	*0.834*	*0.090*				
Incremental delay, d2 (s)	*2.6*	*0.7*	*118.8*	*125.0*				
Initial queue delay, d3 (s)	*0*	*0*	*0*	*0*				
Progression adj factor, PF	*0.899*	*0.537*	*0.952*	*0.837*				
Control delay, d (s)	*25.1*	*4.5*	*146.4*	*148.0*				
Segment LOS Determination								
Travel time, ST (s)	*71.6*	*51.0*	*192.9*	*238.0*				
Travel speed, SA (mi/h)	*25.1*	*35.3*	*9.3*	*15.1*				
Segment LOS	*C*	*A*	*F*	*E*				

Urban Street LOS Determination

Total travel time (s)	*553.6*
Total length (mi)	*2.50*
Total travel speed, SA (mi/h)	*16.3*
Total urban street LOS	*E*

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URBAN STREET WORKSHEET #1

General Information		Site Information	
Analyst	*PSB*	Urban Street	*SR 9*
Agency/Co.	*P.I. Cripe, Inc.*	Direction of Travel	*North-bound*
Date Performed	*2/18/2005*	Jurisdiction	*Greenfield*
Time Period		Analysis Year	*2022*

Project Description: *SR 9 2022 Alt. L5*

Input Parameters

Analysis Period(h) T = *0.25*	Segments							
	1	2	3	4	5	6	7	8
Cycle length, C (s)	*101.0*	*65.0*	*88.0*	*100.0*				
Eff. green to cycle ratio, g/C	*0.396*	*0.615*	*0.341*	*0.450*				
v/c ratio for lane group, X	*0.683*	*0.543*	*1.244*	*1.282*				
Cap of lane group, c (veh/h)	*1314*	*2042*	*1158*	*625*				
Pct Veh on Grn., PVG								
Arrival type, AT	*4*	*4*	*4*	*4*				
Unit Extension, UE (sec)	*0.0*	*0.0*	*0.0*	*0.0*				
Length of segment, L (mi)	*0.50*	*0.50*	*0.50*	*1.00*				
Initial Queue, Qb (veh)	*0*	*0*	*0*	*0*				
Urban street class, SC	*2*	*2*	*2*	*2*				
Free-flow speed, FSS (mi/h)	*40*	*40*	*40*	*40*				
Running Time, TR (s)	*46.5*	*46.5*	*46.5*	*90.0*				
Other delay, (s)	*0.0*	*0.0*	*0.0*	*0.0*				
Delay Computation								
Uniform delay, d1 (s)	*25.3*	*7.2*	*29.0*	*27.5*				
Incremental delay adj, k	*0.50*	*0.50*	*0.50*	*0.50*				
Upstream filtering adj factor, I	*1.000*	*0.672*	*0.823*	*0.090*				
Incremental delay, d2 (s)	*2.9*	*0.7*	*115.8*	*127.9*				
Initial queue delay, d3 (s)	*0*	*0*	*0*	*0*				
Progression adj factor, PF	*0.899*	*0.537*	*0.952*	*0.837*				
Control delay, d (s)	*25.6*	*4.6*	*143.4*	*150.9*				
Segment LOS Determination								
Travel time, ST (s)	*72.1*	*51.1*	*189.9*	*240.9*				
Travel speed, SA (mi/h)	*25.0*	*35.2*	*9.5*	*14.9*				
Segment LOS	*C*	*A*	*F*	*E*				

Urban Street LOS Determination

Total travel time (s)	*554.0*
Total length (mi)	*2.50*
Total travel speed, SA (mi/h)	*16.2*
Total urban street LOS	*E*

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at US 40 - No Build*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	272	996		93	741		99	803		160	883	
Satflow rate	182	1388		146	1394		145	1388		141	1390	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Lane group cap.	82	625		72	627		72	625		72	625	
v/c ratio	3.32	1.59		1.29	1.18		1.38	1.28		2.22	1.41	
Flow ratio	1.49	0.72		0.64	0.53		0.68	0.58		1.13	0.64	
Crit. lane group		N			N			N			N	
Sum flow ratios	2.63											
Lost time/cycle	10.00											
Critical v/c ratio	2.92											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	272	996		93	741		99	803		160	883	
Lane group cap.	82	625		72	627		72	625		72	625	
v/c ratio	3.32	1.59		1.29	1.18		1.38	1.28		2.22	1.41	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Unif. delay d1	27.5	27.5		27.5	27.5		27.5	27.5		27.5	27.5	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	1073	274.6		202.9	97.5		234.7	140.0		592.2	195.1	
PF factor	1.000	0.845		0.836	0.836		1.000	0.836		1.000	0.836	
Control delay	1101	297.9		225.9	120.5		262.2	163.0		619.7	218.1	
Lane group LOS	F	F		F	F		F	F		F	F	
Apprch. delay	470.1			132.2			173.9			279.7		
Approach LOS	F			F			F			F		
Intersec. delay	285.4			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 @ US 40 - Alt. E1*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	259	970		93	714		96	766		156	879	
Satflow rate	226	1388		146	1395		145	1388		141	1391	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Lane group cap.	102	625		72	628		72	625		72	626	
v/c ratio	2.54	1.55		1.29	1.14		1.33	1.23		2.17	1.40	
Flow ratio	1.15	0.70		0.64	0.51		0.66	0.55		1.11	0.63	
Crit. lane group		N			N			N			N	
Sum flow ratios	2.25											
Lost time/cycle	10.00											
Critical v/c ratio	2.50											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	259	970		93	714		96	766		156	879	
Lane group cap.	102	625		72	628		72	625		72	626	
v/c ratio	2.54	1.55		1.29	1.14		1.33	1.23		2.17	1.40	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Unif. delay d1	27.5	27.5		27.5	27.5		27.5	27.5		27.5	27.5	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	720.6	256.2		202.9	80.0		218.6	115.3		567.9	191.4	
PF factor	1.000	0.836		0.836	0.836		1.000	0.836		1.000	0.836	
Control delay	748.1	279.2		225.9	103.0		246.1	138.3		595.4	214.4	
Lane group LOS	F	F		F	F		F	F		F	F	
Apprch. delay	378.1			117.1			150.3			271.8		
Approach LOS	F			F			F			F		
Intersec. delay	246.6			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 @ US 40 - Alt. L2*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	270	970		89	757		101	797		159	848	
Satflow rate	156	1389		146	1395		145	1388		141	1389	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Lane group cap.	72	625		72	628		72	625		72	625	
v/c ratio	3.75	1.55		1.24	1.21		1.40	1.28		2.21	1.36	
Flow ratio	1.73	0.70		0.61	0.54		0.70	0.57		1.13	0.61	
Crit. lane group		N			N			N			N	
Sum flow ratios	2.86											
Lost time/cycle	10.00											
Critical v/c ratio	3.18											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	270	970		89	757		101	797		159	848	
Lane group cap.	72	625		72	628		72	625		72	625	
v/c ratio	3.75	1.55		1.24	1.21		1.40	1.28		2.21	1.36	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Unif. delay d1	27.5	27.5		27.5	27.5		27.5	27.5		27.5	27.5	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	1271	256.2		182.5	107.0		245.5	136.0		586.1	170.9	
PF factor	1.000	0.836		0.836	0.836		1.000	0.836		1.000	0.836	
Control delay	1298	279.2		205.5	130.0		273.0	159.0		613.6	193.9	
Lane group LOS	F	F		F	F		F	F		F	F	
Apprch. delay	501.1			137.9			171.8			260.1		
Approach LOS	F			F			F			F		
Intersec. delay	289.2			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 @ US 40 - Alt. L5*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	273	955		92	729		97	801		152	871	
Satflow rate	202	1388		146	1393		145	1389		141	1390	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Lane group cap.	91	625		72	627		72	625		72	625	
v/c ratio	3.00	1.53		1.28	1.16		1.35	1.28		2.11	1.39	
Flow ratio	1.35	0.69		0.63	0.52		0.67	0.58		1.08	0.63	
Crit. lane group		N			N			N			N	
Sum flow ratios	2.43											
Lost time/cycle	10.00											
Critical v/c ratio	2.70											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	273	955		92	729		97	801		152	871	
Lane group cap.	91	625		72	627		72	625		72	625	
v/c ratio	3.00	1.53		1.28	1.16		1.35	1.28		2.11	1.39	
Green ratio	0.45	0.45		0.45	0.45		0.45	0.45		0.45	0.45	
Unif. delay d1	27.5	27.5		27.5	27.5		27.5	27.5		27.5	27.5	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	928.8	245.7		197.7	89.9		223.9	138.7		543.7	186.8	
PF factor	1.000	0.836		0.836	0.836		1.000	0.836		1.000	0.836	
Control delay	956.3	268.7		220.7	112.9		251.4	161.7		571.2	209.8	
Lane group LOS	F	F		F	F		F	F		F	F	
Apprch. delay	421.5			125.0			171.4			263.5		
Approach LOS	F			F			F			F		
Intersec. delay	262.9			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McKenzie Rd. - No Build*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	94	690		221	501		657	1480		271	1268	
Satflow rate	1736	1721		1770	1783		1787	3395		1787	3456	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Lane group cap.	280	391		286	405		330	1157		330	1178	
v/c ratio	0.34	1.76		0.77	1.24		1.99	1.28		0.82	1.08	
Flow ratio		0.23			0.23			0.34			0.34	
Crit. lane group		Y		Y	N		Y	N		Y	N	
Sum flow ratios	2.29											
Lost time/cycle	15.00											
Critical v/c ratio	2.76											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	94	690		221	501		657	1480		271	1268	
Lane group cap.	280	391		286	405		330	1157		330	1178	
v/c ratio	0.34	1.76		0.77	1.24		1.99	1.28		0.82	1.08	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Unif. delay d1	20.3	34.0		22.0	34.0		24.8	29.0		21.0	29.0	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	3.2	354.4		18.2	126.3		456.6	132.4		20.1	49.4	
PF factor	1.000	1.000		1.000	1.000		1.000	0.952		0.749	0.952	
Control delay	23.5	388.4		40.1	160.3		481.4	160.0		35.8	77.0	
Lane group LOS	C	F		D	F		F	F		D	E	
Apprch. delay	344.7			123.5			258.8			69.7		
Approach LOS	F			F			F			E		
Intersec. delay	196.8			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McKenzie Rd. - E1*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	89	658		201	505		674	1414		271	1159	
Satflow rate	1736	1728		1770	1787		1787	3391		1787	3453	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Lane group cap.	280	393		286	406		330	1156		330	1177	
v/c ratio	0.32	1.67		0.70	1.24		2.04	1.22		0.82	0.98	
Flow ratio		0.23			0.23			0.34			0.34	
Crit. lane group		Y		Y	N		Y	N			N	
Sum flow ratios	2.36											
Lost time/cycle	15.00											
Critical v/c ratio	2.85											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	89	658		201	505		674	1414		271	1159	
Lane group cap.	280	393		286	406		330	1156		330	1177	
v/c ratio	0.32	1.67		0.70	1.24		2.04	1.22		0.82	0.98	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Unif. delay d1	20.3	34.0		21.7	34.0		24.8	29.0		21.0	28.8	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	3.0	314.4		13.5	129.0		479.5	108.3		20.1	22.8	
PF factor	1.000	1.000		1.000	1.000		1.000	0.952		0.749	0.952	
Control delay	23.2	348.4		35.2	163.0		504.3	135.9		35.8	50.2	
Lane group LOS	C	F		D	F		F	F		D	D	
Apprch. delay	309.7			126.6			254.9			47.5		
Approach LOS	F			F			F			D		
Intersec. delay	185.2			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McKenzie Rd. - L2*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	92	669		216	496		650	1448		262	1237	
Satflow rate	1736	1720		1770	1783		1787	3396		1787	3456	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Lane group cap.	280	391		286	405		330	1158		330	1178	
v/c ratio	0.33	1.71		0.76	1.22		1.97	1.25		0.79	1.05	
Flow ratio		0.23			0.23			0.34			0.34	
Crit. lane group		Y		Y	N		Y	N			N	
Sum flow ratios	2.26											
Lost time/cycle	15.00											
Critical v/c ratio	2.72											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	92	669		216	496		650	1448		262	1237	
Lane group cap.	280	391		286	405		330	1158		330	1178	
v/c ratio	0.33	1.71		0.76	1.22		1.97	1.25		0.79	1.05	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Unif. delay d1	20.3	34.0		21.9	34.0		24.8	29.0		20.3	29.0	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	3.1	330.7		16.8	121.3		447.2	120.0		17.7	40.4	
PF factor	1.000	1.000		1.000	1.000		1.000	0.952		0.749	0.952	
Control delay	23.4	364.7		38.7	155.3		472.0	147.6		32.9	68.0	
Lane group LOS	C	F		D	F		F	F		C	E	
Apprch. delay	323.4			119.9			248.1			61.9		
Approach LOS	F			F			F			E		
Intersec. delay	186.3			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McKenzie Rd. - L5*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	92	670		216	493		649	1440		261	1238	
Satflow rate	1736	1720		1770	1783		1787	3396		1787	3456	
Lost time	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Lane group cap.	280	391		286	405		330	1158		330	1178	
v/c ratio	0.33	1.71		0.76	1.22		1.97	1.24		0.79	1.05	
Flow ratio		0.23			0.23			0.34			0.34	
Crit. lane group		Y		Y	N		Y	N			N	
Sum flow ratios	2.25											
Lost time/cycle	15.00											
Critical v/c ratio	2.72											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	TR		L	TR		L	TR	
Adj. flow rate	92	670		216	493		649	1440		261	1238	
Lane group cap.	280	391		286	405		330	1158		330	1178	
v/c ratio	0.33	1.71		0.76	1.22		1.97	1.24		0.79	1.05	
Green ratio	0.38	0.23		0.38	0.23		0.51	0.34		0.51	0.34	
Unif. delay d1	20.3	34.0		21.9	34.0		24.8	29.0		20.2	29.0	
Delay factor k	0.50	0.50		0.50	0.50		0.50	0.50		0.50	0.50	
Increm. delay d2	3.1	331.8		16.8	118.3		445.8	117.0		17.4	40.7	
PF factor	1.000	1.000		1.000	1.000		1.000	0.952		0.749	0.952	
Control delay	23.4	365.8		38.7	152.3		470.6	144.6		32.6	68.3	
Lane group LOS	C	F		D	F		F	F		C	E	
Apprch. delay	324.5			117.7			245.9			62.1		
Approach LOS	F			F			F			E		
Intersec. delay	185.3			Intersection LOS						F		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McClarnon Dr. - No Build*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	210	188		197	100	121	154	1138	138	179	1011	197
Satflow rate	1315	1750		1147	1900	1615	525	3319	1599	448	3319	1599
Lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Lane group cap.	303	404		265	438	373	323	2042	984	276	2042	984
v/c ratio	0.69	0.47		0.74	0.23	0.32	0.48	0.56	0.14	0.65	0.50	0.20
Flow ratio	0.16	0.11		0.17	0.05	0.07	0.29	0.34	0.09	0.40	0.30	0.12
Crit. lane group		N			N	N		N	N		N	N
Sum flow ratios	0.57											
Lost time/cycle	10.00											
Critical v/c ratio	0.68											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	210	188		197	100	121	154	1138	138	179	1011	197
Lane group cap.	303	404		265	438	373	323	2042	984	276	2042	984
v/c ratio	0.69	0.47		0.74	0.23	0.32	0.48	0.56	0.14	0.65	0.50	0.20
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Unif. delay d1	22.9	21.5		23.2	20.3	20.8	6.8	7.3	5.3	8.0	6.9	5.5
Delay factor k	0.50	0.50		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	12.3	3.8		17.1	1.2	2.3	5.0	1.1	0.3	11.2	0.9	0.5
PF factor	1.000	1.000		1.000	1.000	1.000	0.537	0.537	0.537	0.537	0.537	0.537
Control delay	35.2	25.4		40.3	21.5	23.1	8.6	5.0	3.1	15.5	4.6	3.4
Lane group LOS	D	C		D	C	C	A	A	A	B	A	A
Apprch. delay	30.6			30.8			5.2			5.8		
Approach LOS	C			C			A			A		
Intersec. delay	11.2			Intersection LOS						B		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 @ McClarnon Dr. - Alt. E1*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	190	181		187	100	108	154	1031	138	179	958	197
Satflow rate	1315	1755		1174	1900	1615	560	3319	1599	513	3319	1599
Lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Lane group cap.	303	405		271	438	373	345	2042	984	316	2042	984
v/c ratio	0.63	0.45		0.69	0.23	0.29	0.45	0.50	0.14	0.57	0.47	0.20
Flow ratio	0.14	0.10		0.16	0.05	0.07	0.28	0.31	0.09	0.35	0.29	0.12
Crit. lane group		N			N	N		N	N		N	N
Sum flow ratios	0.51											
Lost time/cycle	10.00											
Critical v/c ratio	0.60											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	190	181		187	100	108	154	1031	138	179	958	197
Lane group cap.	303	405		271	438	373	345	2042	984	316	2042	984
v/c ratio	0.63	0.45		0.69	0.23	0.29	0.45	0.50	0.14	0.57	0.47	0.20
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Unif. delay d1	22.5	21.4		22.9	20.3	20.6	6.6	7.0	5.3	7.4	6.8	5.5
Delay factor k	0.50	0.50		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	9.5	3.5		13.5	1.2	2.0	4.1	0.9	0.3	7.2	0.8	0.5
PF factor	1.000	1.000		1.000	1.000	1.000	0.537	0.537	0.537	0.537	0.537	0.537
Control delay	31.9	25.0		36.4	21.5	22.6	7.7	4.6	3.1	11.1	4.4	3.4
Lane group LOS	C	C		D	C	C	A	A	A	B	A	A
Apprch. delay	28.5			28.8			4.8			5.2		
Approach LOS	C			C			A			A		
Intersec. delay	10.3			Intersection LOS						B		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McClarnon Dr. - Alt. L2*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	200	186		193	100	114	154	1082	138	179	997	197
Satflow rate	1315	1751		1155	1900	1615	535	3319	1599	481	3319	1599
Lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Lane group cap.	303	404		267	438	373	329	2042	984	296	2042	984
v/c ratio	0.66	0.46		0.72	0.23	0.31	0.47	0.53	0.14	0.60	0.49	0.20
Flow ratio	0.15	0.11		0.17	0.05	0.07	0.29	0.33	0.09	0.37	0.30	0.12
Crit. lane group		N			N	N		N	N		N	N
Sum flow ratios	0.54											
Lost time/cycle	10.00											
Critical v/c ratio	0.64											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	200	186		193	100	114	154	1082	138	179	997	197
Lane group cap.	303	404		267	438	373	329	2042	984	296	2042	984
v/c ratio	0.66	0.46		0.72	0.23	0.31	0.47	0.53	0.14	0.60	0.49	0.20
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Unif. delay d1	22.7	21.5		23.1	20.3	20.7	6.8	7.1	5.3	7.7	6.9	5.5
Delay factor k	0.50	0.50		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	10.8	3.7		15.6	1.2	2.1	4.7	1.0	0.3	8.9	0.8	0.5
PF factor	1.000	1.000		1.000	1.000	1.000	0.537	0.537	0.537	0.537	0.537	0.537
Control delay	33.5	25.3		38.7	21.5	22.8	8.3	4.8	3.1	13.0	4.5	3.4
Lane group LOS	C	C		D	C	C	A	A	A	B	A	A
Apprch. delay	29.5			30.0			5.0			5.5		
Approach LOS	C			C			A			A		
Intersec. delay	10.7			Intersection LOS						B		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at McClarnon Dr. - Alt. L5*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	204	186		192	100	118	154	1109	138	179	991	197
Satflow rate	1315	1751		1155	1900	1615	538	3319	1599	465	3319	1599
Lost time	2.0	2.0		2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Lane group cap.	303	404		267	438	373	331	2042	984	286	2042	984
v/c ratio	0.67	0.46		0.72	0.23	0.32	0.47	0.54	0.14	0.63	0.49	0.20
Flow ratio	0.16	0.11		0.17	0.05	0.07	0.29	0.33	0.09	0.38	0.30	0.12
Crit. lane group		N			N	N		N	N		N	N
Sum flow ratios	0.55											
Lost time/cycle	10.00											
Critical v/c ratio	0.65											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	TR		L	T	R	L	T	R	L	T	R
Adj. flow rate	204	186		192	100	118	154	1109	138	179	991	197
Lane group cap.	303	404		267	438	373	331	2042	984	286	2042	984
v/c ratio	0.67	0.46		0.72	0.23	0.32	0.47	0.54	0.14	0.63	0.49	0.20
Green ratio	0.23	0.23		0.23	0.23	0.23	0.62	0.62	0.62	0.62	0.62	0.62
Unif. delay d1	22.8	21.5		23.1	20.3	20.7	6.7	7.2	5.3	7.8	6.9	5.5
Delay factor k	0.50	0.50		0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	11.4	3.7		15.4	1.2	2.2	4.6	1.0	0.3	9.9	0.8	0.5
PF factor	1.000	1.000		1.000	1.000	1.000	0.537	0.537	0.537	0.537	0.537	0.537
Control delay	34.1	25.3		38.4	21.5	23.0	8.3	4.9	3.1	14.1	4.5	3.4
Lane group LOS	C	C		D	C	C	A	A	A	B	A	A
Apprch. delay	29.9			29.9			5.1			5.6		
Approach LOS	C			C			A			A		
Intersec. delay	10.9			Intersection LOS						B		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at New Rd. - No Build*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	104	86	207	304	83	123	152	889	264	122	960	54
Satflow rate	1770	1845	1568	1687	1827	1568	1752	3319	1482	1703	3350	1599
Lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Lane group cap.	473	457	388	451	452	388	291	1314	587	306	1327	633
v/c ratio	0.22	0.19	0.53	0.67	0.18	0.32	0.52	0.68	0.45	0.40	0.72	0.09
Flow ratio		0.05	0.13		0.05	0.08		0.27	0.18		0.29	0.03
Crit. lane group		N	N	Y	N	N	Y	N	N		Y	N
Sum flow ratios	0.61											
Lost time/cycle	15.00											
Critical v/c ratio	0.71											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	104	86	207	304	83	123	152	889	264	122	960	54
Lane group cap.	473	457	388	451	452	388	291	1314	587	306	1327	633
v/c ratio	0.22	0.19	0.53	0.67	0.18	0.32	0.52	0.68	0.45	0.40	0.72	0.09
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Unif. delay d1	21.0	30.0	32.9	27.2	30.0	31.0	15.6	25.2	22.4	14.5	25.8	19.1
Delay factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	1.1	0.9	5.2	7.8	0.9	2.1	6.6	2.8	2.5	3.8	3.5	0.3
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	0.727	0.899	0.899	0.727	0.899	0.899
Control delay	22.1	30.9	38.1	35.0	30.8	33.2	17.9	25.4	22.6	14.4	26.7	17.4
Lane group LOS	C	C	D	D	C	C	B	C	C	B	C	B
Apprch. delay	32.4			33.9			24.0			24.9		
Approach LOS	C			C			C			C		
Intersec. delay	26.8			Intersection LOS						C		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at New Rd. - Alt. E1*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	94	78	183	273	78	109	143	803	237	111	861	49
Satflow rate	1770	1845	1568	1687	1827	1568	1752	3319	1482	1703	3350	1599
Lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Lane group cap.	475	457	388	453	452	388	323	1314	587	335	1327	633
v/c ratio	0.20	0.17	0.47	0.60	0.17	0.28	0.44	0.61	0.40	0.33	0.65	0.08
Flow ratio		0.04	0.12		0.04	0.07		0.24	0.16		0.26	0.03
Crit. lane group		N	Y	Y	N	N	Y	N	N		Y	N
Sum flow ratios	0.55											
Lost time/cycle	20.00											
Critical v/c ratio	0.69											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	94	78	183	273	78	109	143	803	237	111	861	49
Lane group cap.	475	457	388	453	452	388	323	1314	587	335	1327	633
v/c ratio	0.20	0.17	0.47	0.60	0.17	0.28	0.44	0.61	0.40	0.33	0.65	0.08
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Unif. delay d1	20.9	29.9	32.4	25.8	29.9	30.7	14.5	24.3	21.9	13.8	24.8	19.0
Delay factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	0.9	0.8	4.1	5.8	0.8	1.8	4.4	2.1	2.1	2.6	2.5	0.2
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	0.727	0.899	0.899	0.727	0.899	0.899
Control delay	21.8	30.7	36.4	31.6	30.7	32.5	14.9	24.0	21.8	12.7	24.7	17.3
Lane group LOS	C	C	D	C	C	C	B	C	C	B	C	B
Apprch. delay	31.3			31.7			22.4			23.1		
Approach LOS	C			C			C			C		
Intersec. delay	25.1			Intersection LOS						C		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at New Rd. - Alt. L2*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	102	87	183	273	103	120	190	870	269	124	862	76
Satflow rate	1770	1845	1568	1687	1827	1568	1752	3319	1482	1703	3350	1599
Lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Lane group cap.	468	457	388	450	452	388	323	1314	587	312	1327	633
v/c ratio	0.22	0.19	0.47	0.61	0.23	0.31	0.59	0.66	0.46	0.40	0.65	0.12
Flow ratio		0.05	0.12		0.06	0.08		0.26	0.18		0.26	0.05
Crit. lane group		N	Y	Y	N	N	Y	Y	N		N	N
Sum flow ratios	0.58											
Lost time/cycle	20.00											
Critical v/c ratio	0.72											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	102	87	183	273	103	120	190	870	269	124	862	76
Lane group cap.	468	457	388	450	452	388	323	1314	587	312	1327	633
v/c ratio	0.22	0.19	0.47	0.61	0.23	0.31	0.59	0.66	0.46	0.40	0.65	0.12
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Unif. delay d1	21.0	30.0	32.4	25.9	30.3	31.0	15.1	25.0	22.5	14.4	24.8	19.3
Delay factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	1.1	0.9	4.1	6.0	1.2	2.1	7.6	2.6	2.6	3.8	2.5	0.4
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	0.727	0.899	0.899	0.727	0.899	0.899
Control delay	22.1	30.9	36.4	31.8	31.5	33.0	18.6	25.1	22.8	14.2	24.8	17.8
Lane group LOS	C	C	D	C	C	C	B	C	C	B	C	B
Apprch. delay	31.2			32.0			23.7			23.0		
Approach LOS	C			C			C			C		
Intersec. delay	25.6			Intersection LOS						C		

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CAPACITY AND LOS WORKSHEET

General Information

Project Description *SR 9 at New Rd. - Alt. L5*

Capacity Analysis

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	106	96	201	298	82	124	151	898	300	137	939	53
Satflow rate	1770	1845	1568	1687	1827	1568	1752	3319	1482	1703	3350	1599
Lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Lane group cap.	474	457	388	448	452	388	298	1314	587	303	1327	633
v/c ratio	0.22	0.21	0.52	0.67	0.18	0.32	0.51	0.68	0.51	0.45	0.71	0.08
Flow ratio		0.05	0.13		0.04	0.08		0.27	0.20		0.28	0.03
Crit. lane group		N	N	Y	N	N	Y	N	N		Y	N
Sum flow ratios	0.59											
Lost time/cycle	15.00											
Critical v/c ratio	0.70											

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Adj. flow rate	106	96	201	298	82	124	151	898	300	137	939	53
Lane group cap.	474	457	388	448	452	388	298	1314	587	303	1327	633
v/c ratio	0.22	0.21	0.52	0.67	0.18	0.32	0.51	0.68	0.51	0.45	0.71	0.08
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Unif. delay d1	21.0	30.2	32.8	27.0	29.9	31.1	15.3	25.3	23.1	14.8	25.6	19.1
Delay factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	1.1	1.0	4.9	7.6	0.9	2.2	6.0	2.9	3.2	4.8	3.2	0.3
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	0.727	0.899	0.899	0.727	0.899	0.899
Control delay	22.1	31.2	37.7	34.6	30.8	33.2	17.2	25.6	23.9	15.6	26.2	17.4
Lane group LOS	C	C	D	C	C	C	B	C	C	B	C	B
Apprch. delay	32.0			33.6			24.3			24.5		
Approach LOS	C			C			C			C		
Intersec. delay	26.7			Intersection LOS						C		

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SHORT REPORT

General Information		Site Information	
Analyst	~~DS~~ PSB	Intersection	SR 9 at New Rd.
Agency or Co.	~~Greenfield~~ P.L. Cripe	Area Type	~~All other areas~~ Urban
Date Performed	~~5/28/2002~~ 2-18-05	Jurisdiction	Greenfield
Time Period	Alt. L2 (or L5 or E2)	Analysis Year	~~00441-70000~~ 2022

Volume and Timing Input

Adjust with vol. from build alts.

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume (vph)	94	77	206	274	75	131	137	800	268	110	864	79
% Heavy veh	2	3	3	7	4	3	3	9	9	6	8	1
PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A)	P	P	P	P	P	P	P	P	P	P	P	P
Startup lost time	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext. eff. green	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type	3	3	3	3	3	3	4	4	4	4	4	4
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Ped/Bike/RTOR Volume	0		20	0		20	0		30	0		30
Lane Width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking/Grade/Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking/hr												
Bus stops/hr	0	0	0	0	0	0	0	0	0	0	0	0
Unit Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0

Phasing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 10.0	G = 25.0	G =	G =	G = 10.0	G = 40.0	G =	G =
	Y = 3	Y = 5	Y =	Y =	Y = 3	Y = 5	Y =	Y =

Duration of Analysis (hrs) = 0.25 Cycle Length C = 101.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	104	86	207	304	83	123	152	889	264	122	960	54
Lane group cap.	473	457	388	451	452	388	291	1314	587	306	1327	633
v/c ratio	0.22	0.19	0.53	0.67	0.18	0.32	0.52	0.68	0.45	0.40	0.72	0.09
Green ratio	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Unif. delay d1	21.0	30.0	32.9	27.2	30.0	31.0	15.6	25.2	22.4	14.5	25.8	19.1
Delay factor k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Increm. delay d2	1.1	0.9	5.2	7.8	0.9	2.1	6.6	2.8	2.5	3.8	3.5	0.3
PF factor	1.000	1.000	1.000	1.000	1.000	1.000	0.727	0.899	0.899	0.727	0.899	0.899
Control delay	22.1	30.9	38.1	35.0	30.8	33.2	17.9	25.4	22.6	14.4	26.7	17.4
Lane group LOS	C	C	D	D	C	C	B	C	C	B	C	B
Apprch. delay	32.4			33.9			24.0			24.9		
Approach LOS	C			C			C			C		
Intersec. delay	26.8			Intersection LOS						C		

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HCS2000™ DETAILED REPORT

General Information		Site Information	
Analyst	DS	Intersection	SR 9 at New Rd.
Agency or Co.	Greenfield	Area Type	All other areas
Date Performed	5/28/2002	Jurisdiction	
Time Period		Analysis Year	00441-70000
		Project ID	

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Number of lanes, N_1	1	1	1	1	1	1	1	2	1	1	2	1
Lane group	L	T	R	L	T	R	L	T	R	L	T	R
Volume, V (vph)	94	77	206	274	75	131	137	800	268	110	864	79
% Heavy vehicles, %HV	2	3	3	7	4	3	3	9	9	6	8	1
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Pretimed (P) or actuated (A)	P	P	P	P	P	P	P	P	P	P	P	P
Start-up lost time, l_1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Extension of effective green, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival type, AT	3	3	3	3	3	3	4	4	4	4	4	4
Unit extension, UE	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Filtering/metering, I	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Initial unmet demand, Q_b	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ped / Bike / RTOR volumes	0		20	0		20	0		30	0		30
Lane width	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Parking / Grade / Parking	N	0	N	N	0	N	N	0	N	N	0	N
Parking maneuvers, N_m												
Buses stopping, N_B	0	0	0	0	0	0	0	0	0	0	0	0
Min. time for pedestrians, G_p	3.2			3.2			3.2			3.2		

Phasing	Excl. Left	EW Perm	03	04	Excl. Left	NS Perm	07	08
Timing	G = 10.0	G = 25.0	G =	G =	G = 10.0	G = 40.0	G =	G =
	Y = 3	Y = 5	Y =	Y =	Y = 3	Y = 5	Y =	Y =
Duration of Analysis, T = 0.25					Cycle Length, C = 101.0			

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adjusted flow rate, v	104	86	207	304	83	123	152	889	264	122	960	54
Lane group capacity, c	473	457	388	451	452	388	291	1314	587	306	1327	633
v/c ratio, X	0.22	0.19	0.53	0.67	0.18	0.32	0.52	0.68	0.45	0.40	0.72	0.09
Total green ratio, g/C	0.38	0.25	0.25	0.38	0.25	0.25	0.52	0.40	0.40	0.52	0.40	0.40
Uniform delay, d_1	21.0	30.0	32.9	27.2	30.0	31.0	15.6	25.2	22.4	14.5	25.8	19.1
Progression factor, PF	1.000	1.000	1.000	1.000	1.000	1.000	0.727	0.899	0.899	0.727	0.899	0.899
Delay calibration, k	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Incremental delay, d_2	1.1	0.9	5.2	7.8	0.9	2.1	6.6	2.8	2.5	3.8	3.5	0.3

Initial queue delay, d_3												
Control delay	22.1	30.9	38.1	35.0	30.8	33.2	17.9	25.4	22.6	14.4	26.7	17.4
Lane group LOS	C	C	D	D	C	C	B	C	C	B	C	B
Approach delay	32.4			33.9			24.0			24.9		
Approach LOS	C			C			C			C		
Intersection delay	26.8			X_c = 0.71			Intersection LOS			C		

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